AMENDMENTS TO THE CLAIMS

1.   (Original) A method for adjusting a treatment plan comprising:

receiving a treatment plan of a target volume;

receiving a fluoroscopy data image of the target volume; and

adjusting automatically the treatment plan based on movement in the

fluoroscopy data image.

2.   (Original) The method of claim 1, wherein the adjusting includes adjusting

treatment field information to allow for movement in a field.

3.   (Original) The method of claim 1, wherein the adjusting includes adjusting

gating information in the treatment plan.

4.   (Currently Amended) A system comprising:

a treatment planning component to generate a treatment plan; [and]

a simulation component to simulate [the] an execution of the treatment plan on

a patient[.] ; and

a third component to adjust the treatment plan based on the simulated

execution of the treatment plan.

5.   (Canceled)

6.   (Original) The system of claim 4, wherein the treatment plan includes a digitally reconstructive radiograph image.

7.   (Currently Amended) The system of claim 6, wherein the simulation component generates digital fluoroscopy images of [the] a target volume to confirm the digitally reconstructive radiograph image.

8.   (Original) The system of claim 6, wherein the digitally reconstructive radiograph image is imported into the system.

9.   (Original) The system of claim 6, further comprising:

a cone-beam computed tomography scanner to generate a digitally reconstructive radiograph image.

10-18 (Canceled)

19.   (Currently Amended) A method of adjusting a radiotherapy simulator system comprising:

displaying a digital image of a patient based on a treatment plan;

providing input associated with the digital image; and

automatically adjusting one or more [components] of a radiation source and an imager of the radiotherapy simulator system based on the input associated with the digital image.

20.   (Canceled)

21.   (Original) The method of claim 19, wherein displaying the digital image

includes overlaying a simulator digital image and a digitally reconstructed radiograph

image.

22.   (Original) The method of claim 21, further comprising:

        automatically displaying fields of data based on the digital image.

23.   (Currently Amended) The method of claim 19, further comprising:

        recalculating the treatment plan based on the [corrected] input associated with

the digital image; and

        saving the recalculated treatment plan.

24.   (Currently Amended) The method of claim 19, wherein the providing [input]

includes providing a radiation field input.

25.   (Currently Amended) A method of adjusting a treatment plan comprising:

        displaying a digital image of a patient based on the treatment plan;

        providing input associated with the digital image; [and]

        automatically adjusting the treatment plan based on the input associated with

the digital image[.] ; and

recalculating a treatment plan based on the input associated with the digital image; and

saving the recalculated treatment plan.

26.   (Original) The method of claim 25, wherein displaying the digital image includes overlaying a simulator digital image and a digitally reconstructed radiograph image.

27.   (Original) The method of claim 26, further comprising:

automatically displaying fields of data based on the digital image.

28.   (Canceled)

29.   (Currently Amended) The method of claim 25, wherein the providing [input] includes providing a radiation field input.

30-31 (Canceled)

32.   (Currently Amended) A machine-readable medium having instructions to cause a machine to perform a method of adjusting [a method of adjusting] a radiotherapy simulator system, the method comprising:

displaying a digital image of a patient based on a treatment plan;

providing input associated with the digital image; and

automatically adjusting one or more [components] <u>of a radiation source and an</u> <u>imager</u> of the radiotherapy simulator system based on the input associated with the digital image.

33. (Canceled)

34. (Original) The machine-readable medium of claim 32, wherein displaying the digital image includes overlaying a simulator digital image and a digitally reconstructed radiograph image.

35. (Original) The machine-readable medium of claim 34, further comprising:

automatically displaying fields of data based on the digital image.

36. (Currently Amended) The machine-readable medium of claim 32, further comprising:

recalculating the treatment plan based on the [corrected] <u>input associated with</u> <u>the</u> digital image; and

saving the recalculated treatment plan.

37. (Currently Amended) The machine-readable medium of claim 32, wherein the providing [input] includes providing a radiation field input.

38.   (Currently Amended) A machine-readable medium having instructions to cause a machine to perform a method of adjusting a treatment plan, the method comprising:

displaying a digital image of a patient based on the treatment plan;

providing input associated with the digital image; [and]

automatically adjusting the treatment plan based on the input associated with the digital image[.] :

recalculating a treatment plan based on the input associated with the digital image; and

saving the recalculated treatment plan.

39.   (Original) The machine-readable medium of claim 38, wherein displaying the digital image includes overlaying a simulator digital image and a digitally reconstructed radiograph image.

40.   (Original) The machine-readable medium of claim 38, further comprising:

automatically displaying fields of data based on the digital image.

41.   (Canceled)

42.   (Currently Amended) The machine-readable medium of claim 38, wherein the providing [input] includes providing a radiation field input.

43.   (Original) A machine-readable medium having instructions to cause a

machine to perform a method for adjusting a treatment plan, the method comprising:

   receiving a treatment plan of a target volume;

   receiving a fluoroscopy data image of the target volume; and

   adjusting automatically the treatment plan based on movement in the

fluoroscopy data image.

44.   (Currently Amended) The machine-readable medium of claim 43, wherein the

adjusting includes adjusting field information to allow for movement in [the] a field.

45.   (Original) The machine-readable medium of claim 43, wherein the adjusting

includes adjusting gating information in the treatment plan.

46.   (Currently Amended) A system comprising:

   a means for generating a treatment plan; [and]

   a means for simulating the treatment plan on a patient[.] ; and

   a means for adjusting the treatment plan based on a simulated execution of

the treatment plan.

47.   (Canceled)

48.   (Original) The system of claim 46, wherein the treatment plan includes a

digitally reconstructive radiograph image.

49.   (Currently Amended) The system of claim 48, wherein the means for simulating generates digital fluoroscopy images of [the] a target volume to confirm the digitally reconstructive radiograph image.

50.   (Original) The system of claim 48, wherein the digitally reconstructive radiograph image is imported into the system.

51.   (Original) The system of claim 48, further comprising:

a cone-beam computed tomography scanner to generate a digitally reconstructive radiograph image.

52.   (Original) A method of performing brachytherapy comprising:

placing a patient on a patient support;

producing an image of the patient using a flat panel imager while on the patient support;

producing a treatment plan for placement of a radiation source while the patient is on the patient support; and

treating the patient according to the treatment plan on the patient support.

53.   (Canceled)

54.   (Canceled)

55.   (Canceled)

56.   (Currently Amended) A radiation simulation system comprising:

a gantry having a radiation source;

a patient support;

a radiation detector; and

wherein said radiation source is at a fixed position relative to the gantry and

wherein said system comprises a simulation component.

57.   (Currently Amended) [The system as described in claim 56, further

comprising] A radiation simulation system comprising:

a gantry having a radiation source;

a patient support;

a radiation detector; and

means to move the patient support as the gantry rotates to maintain a constant

distance between the radiation source and a [defined] point defined in [space] relation

to the patient support.

58.   (Currently Amended) A radiation simulation system comprising:

a gantry having a radiation source;

a patient support; and

a radiation detector;

wherein the gantry [is] comprises a single cast frame [gantry], wherein the frame comprises a first elongate portion and a second elongate portion disposed at an angle to one another, and wherein the gantry, the patient support, and the radiation detector [being] are electronically coupled.

59.   (Original) The radiation simulation system of claim 58, wherein the gantry is an aluminum cast gantry.